

50

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	21911
<b>Description:</b> Doubler	<b>Part Number:</b>	D3144-13
<b>Dwg:</b> D3144 Rev. B	<b>Qty:</b>	12 <del>10</del>
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	HJ	04.11.30	10
2	PG	Issue P/O: <u>7002547</u> <b>Email or Ship DXF file to vendor</b> Laser Cut D3144-13 flat pattern per Dwg D3144 Possible Supplier: GFI or Industrial Laser <b>Material release note is required</b>	LL	05.07.11	10
3	RG	Receive and Inspect for transit damage <b>Ensure material release note is attached</b>	CL	05/03/01	12
4	QC6	Inspect dimensions as per Dwg D3144	RF	05.03.10	12
5	GA	Deburr	SB	05/04/12	12
6	FP	Chemical Conversion Coat per QSI 005 4.1	ml	05-04-15	12
7	FP	Powder Coat Black Sandtex (Ref: 4.3.5.7) per QSI 005 4.3	FF	05/04/25	12
8	QC3	Inspect Powder Coat	ml	05-04-25	12
9	ST	Identify and Stock	ml	05-04-25	12
10	AC	Cost / part: <u>25.41</u>	Sgc	05.04.26	12
11	DC	Close W/O <u>27.56</u> Inspect Level 21	HJ	05.04.29	12

Rev	Date	Change	Revised By	Approved
A	04.11.29	New issue	KJ/RF	

RELEASED  
04.11.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

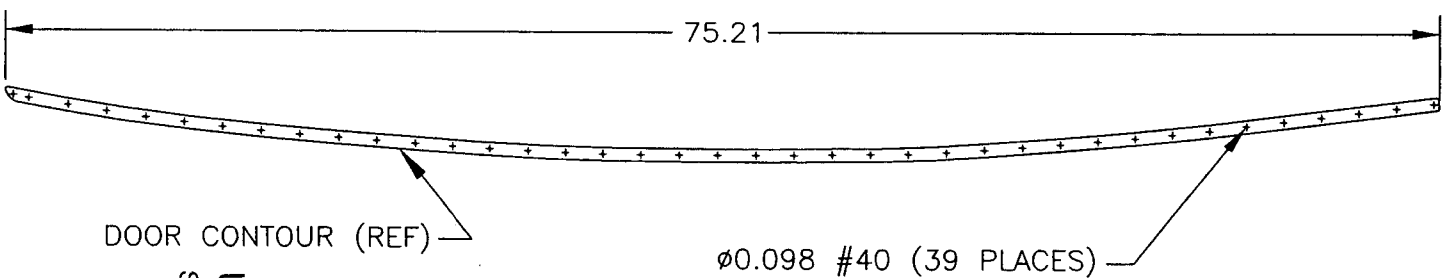
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

**DART**

DESIGN	<i>RF</i>	DRAWN BY	<i>RF</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	DRAWING NO. D3144
DATE	04.09.17	TITLE	DOUBLER	REV. B SHEET 4 OF 9
		SCALE	NTS	

**RELEASED**  
04/11/23**D3144-13 DOUBLER**

REPLACES PREMIER P/N B30-23000-211

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AGREEMENT  
WITH NOTICE  
WORK ORDER  
NO. 21911

**D3144-13 NOTES:**

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.020 THICK (REF DART SPEC M2024T3S.020)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING FILE "D3144-B4.DWG"

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 17, 2004  
07:47 am

Work Order No : 0021911  
Project Name : D3144-13  
Project For : WK450  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3144-13  
Description : Doubler  
Manufactured : No  
Amount Req'd : 0  
Amount Done : 0  
Start Date : 11-16-04  
Est Finish Date : 12-04-04  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Margin : 0.000%  
Actual Margin : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

CERTIFICATE OF COMPLIANCE  
CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 1 OUR JOB NO J0124334 SHIPPING MEMO 0292911

ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
--	10 PCS	2007542	D3144-13		DOUBLER	B

MATERIAL AL 2024-T3 (QQ-A-250/4) SUPPLIED BY ATLAS / IDEAL METALS / ALCOA INC MAT. REL. NO. 646793 ATT'D

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 25 FEBRUARY 2005

G.F.I. Q.C. REP. *Patricia Harty*

C e r t i f i c a t e   d e   C o n f o r m i t e

Vendu Par:  
ATLAS/IDEAL METALS  
3399 FRANCIS HUGHES  
LAVAL QC H7L 5A5  
GST/TPS REG. # 142997238  
QST/TVQ REG. # 1022412252  
Tel: 514-385-0111 Teloc: 514-385-2330

P/O No: 55235 & ~~55236~~  
Rel :  
S/O No: 271804 1  
B/L No:  
Inv No:

Vendu A: ( 124490 )  
G F I INC. \*\*\*  
180 AVE LABROSSE  
POINTE CLAIRE  
Tel: 1514630-4877  
Teloc: 514-630-4849

QC H9R 1A1

Livre V: ( 1 )  
G F I INC. \*\*\*  
180 AVE LABROSSE  
POINTE CLAIRE  
H9R 1A1

QC

Certificat de Conformite

Cert. No: 26900

Code: 54181250  
AL SHT TL QQA250/4 2024T3 BARE  
.020 X 48 X 144

Mcx      Poids  
1            14

ALCOA PO 323002

Numero de Lot	Test ID	Numero de Controle
646793	BOM-227	29C20269

1            14

COND: 27.0/27.1%  
P.O. (G.F.I.): 55235

\*\*\* Analyse Chimique      \*\* Mecanique      \*\*\*\*\*

-----  
CECI N'EST QU'UN CERTIFICAT DE CONFORMITE  
-----

A QUI DE DROIT,

LA PRESENTE EST POUR CERTIFIER QUE LE MATERIEL  
FOURNI CI-HAUT EST CONFORME AUX SPECIFICATIONS  
INDIQUEES SUR VOTRE COMMANDE CI-HAUT MENTIONNEE.

  
SIGNATURE AUTORISEE

# CERTIFIED INSPECTION REPORT

A 02 Inc.

PITTSBURGH, PA DAVENPORT

Ship From: DAV DRT,

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this report.

*Vernon J. Tamm*

Vernon J. Tamm  
Executive Vice President Alcoa Mill Products

*Michael J. Stoglund*

Michael J. Stoglund  
Quality Assurance Manager

272060

Ship Date

2100-09-29

B.O. No./Govt Contract No.

223002

272060

BL No.

22565

Invoice No.

25694

Customer

ATLAS IDEAL METAL

Alcoa No. Item

IC065220-1

Ship To: ATLAS IDEAL METALS  
268 ORBIDA ROAD,  
BRAMPTON, ON, L6T 4

## Item Description

.020 IN TK X 48.001 IN W. CAT ID 164130 (N) A/T 2024-  
T3 COILED SHEET MILL FINISH 5418-1225 PER AMS-QC-A-  
250/4 REV A PER AMS4037, BIV D PER ASTM219 REV  
96 ((NOT MARKED)) LIGHTLY OILED  
COIL SIZES: ID 20 IN COIL WGT: MAX 5625 LB SKID WGT: 6000 LB QUAN TOL +/-  
25 % CQR D164130 REV 10 CUST REQ CD-09-  
27 \*\*\* W/E 00-35-201 \*\*\*

Num	Package Ticket	Lot	Weight	Quantity	COM	Pc Id/Se-1
1	384354	646793	5725	1	PC	

Notes for CQR: D164130.10

PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/4 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/4E, AMENDMENT 2.  
PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/4E AMENDMENT 2 ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/4.

CQR: D164130.10 -Specification Limits

Temp Dir	UTS	TYS	EL4D
T3 Long Transv.	KSI	KSI	PCT
Max	63.0	42.0	12
Min			

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Other	Other	Aluminum
Alloy 2024	Max	.50	.50	4.9	.9	1.8	.10	.25	.15	.05	.15
	Min			3.8	.30	1.2					

REMAIN:

Lot: 646793 -Mechanical, Physical, Metallography, Quantometer Results

Temp Dir	No. Test	UTS	TYS	EL4D
T3 Long Transv.	2	KSI	KSI	PCT
Max		70.2	47.1	18.5
Min		69.9	47	18

# INSPECTION REPORT

Al a Inc.

PITTSBURGH, PA DAVENPORT, IA.

Ship From: DAVENPORT, IA.

I certify that the material covered by this certificate has been inspected and has been found to meet the requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

96602

272060

Ship Date

B.L. No.

Invoice No.

Alcoa No. Item

Page 2

2000-09-29

72665

25694

1C065220-1

P.O. No./Govt Contract No.

Customer

323002

ATLAS IDEAL METAL

*Vernon J. Tamm*

Vernon J. Tamm  
Executive Vice President Alcoa Mill Products

*Michael J. Skoglund*

Michael J. Skoglund  
Quality Assurance Manager

Lot: 646793 - Mechanical, Physical, Metallography, Quantometer Results (cont.) -----

Cast Number	Chemical	SI	FE	CU	MN	MG	CR	ZN	TI
H9147053	Actuals	.06	.15	4.6	.66	1.5	.01	.18	.03

11/22/88 16:38:39 Vincent Metal Goods-> +450 975 9986 Vincent Metal Goods